

A machine for Scope Mounting

U.S. Patent Application of:
STANLEY ROLAND WOLFE.

"Express mail" mailing label number
EV123608211 US

Date of Deposit: 9/19/03

I hereby certify that this correspondence, including the attachments listed on the accompanying New Utility Patent Application Transmittal, is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

STANLEY ROLAND WOLFE
(Typed or printed name of person mailing paper or fee)

Stanley R Wolfe
(Signature of person mailing paper or fee)

Title of the Invention

A machine for Scope Mounting

Cross Reference to Related Applications

This application is based on provisional application serial number 60/412,691, filed on 09/23/2002.

Statement Regarding Federally Sponsored Research or Development

Not Applicable

Description of Attached Appendix

Not Applicable

Background of the Invention

This invention relates generally to the field of Scope Mounts and more specifically to a fully integrated, contiguously manufactured Scope Mount with rifle action sleeves, that altogether eliminates parts and reduces production costs, maintains maximum stability, and provides a drop compensating mechanism for long range shooting.

A need has existed for an all-inclusive scope mount

This invention relates generally to the field of Scope Mounts and more specifically to a fully integrated, contiguously manufactured Scope Mount with rifle action sleeve, the altogether eliminates parts and reduces production costs, maintains maximum stability,

and provides a drop compensating mechanism for long range shooting.

A need has existed for an all-inclusive scope mount that not only eliminates intricate parts but that also incorporates a device for bullet drop compensation thus affording a shooter solutions for long and short range shooting with via instantaneous adjustment. The issue of drop compensation has been addressed with prior inventions. Generally, as the distance between a target and rifle increases, the angle of the rifle must be elevated upward above the horizon to compensate for the vertical drop of the projectile during its travel from the rifle to the target, caused by gravitational forces.

When using a rifle for long range shooting, a rifleman, shooter, sniper or hunter needs ease of use, and a weapon that allows "on the fly" adjustment from one distance to another, say for example from 100 yards to 1,500 yards and back to 500 yards. My preferred embodiment accomplishes this with a simplistic design and also, by default, eliminates a multitude of parts that usually contribute to a diminishment in stability and reliability, such as the elimination of a detachable scope mount or scope base, since these items, and much more, are permanent features of my preferred embodiment. Prior embodiments have addressed bullet drop compensation using several different methodologies employing a multitude of parts and adjustments. Some have housed the entire scope with adjustment directly contacted to the scope for adjustment and security. Others have allowed a scope to rest on a spring with engaging vertical and lateral adjustment screws, altogether residing within the scope rings. Prior embodiments have addressed a mounting system that incorporates and vertical and lateral adjustments for bullet drop compensation, whilst maintaining the claim that parts

have been eliminated in the process. Some embodiments have provided adjustments to the rear mounting area using a multitude of adjustment parts and dials. The most similar design is provided by Moore with patent 5,400,539, wherein a scope mount is provided that attaches directly to a base with multiple adjustable stops that accomplish given ranges according to cartridge specifications. Other prior art include Buehler 2,951,292, Dahlberg 2,830,373, Miller Jr. 3,187,435, Unertl Et Al 2,491,431, Litschert 2,336,107, Unertl 2,208,913, Oneill 2,101,037, and Holden 4,397,107.

The deficiency in prior embodiments is evidenced by the extensive use of parts and interconnections required to accomplish the simple task of elevation adjustment for bullet drop compensation while providing a rifle scope mount and other integrated, incidental features. By merely reviewing the prior art one can see that a multitude of parts including pivot pins, holding screws, springs, separately constructed bases and mounts, spacers, clamps, turrets, and more. All of the aforementioned are naturally, inconspicuously integrated in my preferred embodiment altogether accomplishing a scope mounting device that simultaneously provides for bullet drop compensation. Some inventions fully encapsulate a scope and use dials and springs for lateral and vertical adjustment, requiring attachment to a pre-existing scope mount. No prior invention finalizes the ultimate possibility, encompassing absolute elimination of interfunctioning parts incorporating a drop compensating feature, contiguously manufactured resulting in lower production cost, resulting in three main parts to accomplish an entire implement comprising a Rifle Action, a Rifle Barrel, and the Preferred Embodiment itself.

Brief Summary of the Invention

The primary object of the preferred embodiment is to provide a more stable, contiguously designed, all-inclusive scope mount for telescopic devices, manufactured from aluminum or other metal, by extrusion, machining, molding, shaping, cutting, or other process, that altogether eliminates independent parts, scope mounts and blocks, and by default reduces production costs.

Another object of the invention is to provide a fully integrated and stable drop compensating device for "on the fly" alternation between long and short distances without a need for tools when adjusting, up to and including the maximum capability of a rifle cartridge as applied to a given rifle, yet integrated into the initial manufacturing.

Other objects and advantages of the present invention will become apparent from the following descriptions, taken in connection with the accompanying drawings, wherein, by way of illustration and example, an embodiment of the present invention is disclosed.

In accordance with a preferred embodiment of the invention, there is disclosed a Scope Mounting Device comprising: 1. A Scope Mount, non-movable and fully integrated for scope attachment 2. A Torque Rail with adjustment dial and placement holding dial, facilitating compensation for elevation drop when engaged in long range shooting 3. A Recoil Lug, non-movable and fully integrated 4. An Exhaust Hole and Cartridge Ejection Port, to allow escape for cartridge and emissions 5. An attachable Scope Mount, alternately designed from claims 1-4, containing a Torque Rail and Adjustment and Holding Dials, attachable to a rifle, and detachable from a rifle, altogether "on the fly", versus a fully integrated extruded design. The preferred embodiment comprises a permanent scope base with scope mounts and threaded holes for scope cap attachment thereon, a drop compensating torque rail for range and

elevation adjustment, a set of range elevation adjustment dials not requiring tools for adjustment, a permanent recoil lug for inseting into a rifle stock, and a permanent sleeve for encapsulating a rifle action, altogether manufactured as one encapsulating embodiment accompanied only by incidental parts required for implementation and usage.

Brief Description of the Drawings

The drawings constitute a part of this specification and include exemplary embodiments to the invention, which may be embodied in various forms. It is to be understood that in some instances various aspects of the invention may be shown exaggerated or enlarged to facilitate an understanding of the invention.

Figure 1 is an elevation view of the Left Side View of the preferred embodiment

Figure 2 is an perspective view of the Top View of the preferred embodiment

Figure 3 is a elevation view of the Alternate Design, allowing detachability, consisting only of the upper half of the preferred embodiment with attachment clips on the underside

Figure 4 is a side cutaway, exemplifying an alternate design of the invention

Detailed Description of the Preferred Embodiments

Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

Referring to the drawings, from figures 1 through and including figure 4, each figured drawing shows a different elevation or perspective viewing angle so as to provide a detailed understanding of the shape and form of the preferred embodiment.

In Figure 1, the invention provides a permanent, contiguously integrated Scope Mount located at the back **C1** and front **C2** as attached directly upon the Torque Rail **C3** sufficiently providing an integrated base and thus eliminating a separate base for scope mounting. As apparent from Figure 1, the Torque Rail **C3** is simply derived from the Longitudinal Cut **C4** coupled with a drilled Pivot Hole **C2**, altogether comprising the drop compensating mechanism of the preferred embodiment, fully integrated. Also apparent in Figure 1, a set of dials consisting of the Vertical Range and Elevation Dial (the "VREA Dial") **A** used for elevation adjustment, located at the back of the Torque Rail **C3** behind the rear Scope Mount **C1** and the Position Holding Dial (the "PH Dial") **B** located in front of the rear Scope Mount **C1**, altogether used to accomplish the drop compensation aspect of the preferred embodiment.

Also apparent in Figure 1 is the Recoil Lug **C6** located at the front-bottom of the

invention providing a method for inseting into a rifle stock and thus eliminating the need for a separate lug device, as is commonly the case. The Exhaust Hole **C7** located at the middle simply allows for escaping emissions as cartridges are expended.

Also apparent from Figure 1, although not part of the invention, is a Rifle Barrel **E** located at the front of the invention. as it enters the front and engages the Trigger Action **D** inside of the preferred embodiment, thus providing a sleeve, altogether residing in full encapsulation. Apparent in Figure 2 is the Cartridge Ejection Port **C8** located towards the back, encapsulating the Trigger Action **D** - although the Trigger Action is not part he invention and is provided only for illustrative purposes.

The integration of a Torque Rail **C3** coupled with Scope Mounts **C1-C2** altogether contiguously integrated and controllable with the VREA Dial **A** and PH Dial **B** has been accomplished with my design. My preferred embodiment takes this needed, integrated technology further by incorporating a recoil lug **C6** whereas past designs have offered a separate piece that separates the Trigger Action **D** from the Barrel **E** at the interaction point, not seen in any of my figures due to the encapsulating nature of the preferred embodiment. The Exhaust Hole **C7** and Cartridge Ejection Port **C8** are merely incidental to the design and serve to accommodate the normal functioning's of a rifle's implements. Since my design is a completely integrated, contiguous structure, it can therefore be manufactured by machining process, extrusion process, or other process used to manipulate malleable, yet resilient materials including, but not limited to aluminum, titanium, hardened plastics, and other materials of the like, and thus also eliminates parts and reduces production costs in the process. The Scope Mounts **C1-C2** may be changed during manufacture for the accommodation of smaller or larger diameter scopes and would simply be determined upon design for a

particular rifle requiring a particular cartridge, deriving a given range, thus requiring a particular scope. However, the preferred embodiment will remain substantially the same no matter the particularities applied or involved.

The VREA Dial **A** is graduated based upon certain specifications within the scope to achieve specific distances based upon the amount of revolutions exerted. For example, if a shooter desired to shoot to a distance of 1,200 yards using a Remington 700, the shooter could simply pick up my invention as it were already incorporated into the rifle, and turn the VREA Dial **A** counterclockwise until the shooter could turn it no more. This would "bottom out" the settings to begin a new determination of a new distance, in this case 1,200 yards. The shooter would be able to accomplish 100 yards based on the scopes natural "0 setting" and would accomplish no more than 600 yards within the view, in this example using a Burris Signature 6x24 Scope. The shooter could then turn the VREA Dial **A** clockwise on revolution at which point the scopes mildots would have a new group of settings, or a "new window of view" that would accommodate up to approximately 1,000 yards. A shooter could again turn the VREA Dial **A** another full revolution to accommodate up to 1,800 yards, thus accomplishing the approximate maximum capacity of the rifle cartridge, in this example. The preferred embodiment affords a shooter several windows of view based on the same scope, for the purpose of shooting long distances, effectively maximizing the scopes capacity for a given rifle cartridge.

Figure 4 is a side cutaway of the invention that shows an alternate design, encompassing the same features of the preferred embodiment but eliminates the permanence and integration of **B**, **C6**, **C7**, **C8**, and does not facilitate the encapsulation of **D** and **E**. This alternative design would simply attach onto any given rifle using a

Picatinny Rail, typically used for mounting scope rings.

While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.